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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,742	12/20/2001	Richard Carroni	033275-233	5639
7590	01/05/2005		EXAMINER DUONG, THANH P	
Robert S. Swecker BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			ART UNIT 1764	PAPER NUMBER
DATE MAILED: 01/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,742

Applicant(s)

CARRONI ET AL.

Examiner

Tom P Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 26-28, 31 and 32 is/are rejected.
- 7) ☒ Claim(s) 14-25, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/20/01; 08/09/02; 10/29/03; 08/07/02
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 4-6, 13, 26-28, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Dalla Betta et al. (5,232,357). Dalla Betta discloses a catalyzer (Fig. 3B), comprising: a plurality of plane sheets (38) arranged superposed and spaced apart from each other in a stack, each two successive plane sheets defining a channel that extends parallel to a flow direction, said channel being delimited by the plane sheets; and a catalytic coating disposed on a predetermined section of each plane sheet (coated one side) and defining a coated section, the coated section positioned opposite to an uncoated section of the plane sheet (Fig. 3B), wherein at least a portion of a heat radiation emitted from the catalytic coating is absorbed by the uncoated section of the plane sheet (Col. 10, lines 56-62); a corrugated sheet having a plurality of ridges and grooves (36) disposed within the channel, the ridges connected to the plane sheets of the channel and the grooves substantially parallel to the flow direction; a catalytic coating disposed on at least a portion of the corrugated sheet, the portion defining a coated section of the corrugated sheet (Fig. 3B); the uncoated section

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of the plane sheet is provided with a material for absorbing at least a portion of the heat radiated from the catalytic coating or for promoting a recombination reaction of at least one radical (Fig. 3B); the cross section of each of the channel is essentially same; each of the coated sections of each corrugated sheet is disposed within a groove of the corrugated sheet; each of the successive corrugated sheets in the stack are staggered relative to the coated sections (Fig. 3B); the coated section is a parallel, continuous band of approximately constant width that extends in the flow direction, the band arranged within the groove of the corrugated sheet alternately on a top side and a bottom side of the corrugated sheet and a cross section of the corrugated sheet perpendicular to the flow direction has the band on only one side (Fig. 3B); and the catalyzer is used for an exothermic reaction having a concomitant, homogeneous gas phase reaction and is used in a gas turbine (Abstract).

2. Claims 1, 5, 13, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Divisek et al. (5,998,056). Divisek et al. discloses a catalyzer (Fig. 1B), comprising: a plurality of plane sheets (1,2) arranged superposed and spaced apart from each other in a stack, each two successive plane sheets defining a channel that extends parallel to a flow direction, said channel being delimited by the plane sheets; and a catalytic coating disposed on a predetermined section of each plane sheet (4) and defining a coated section, the coated section positioned opposite to an uncoated section of the plane sheet (Fig. 1B), wherein at least a portion of a heat radiation emitted from the catalytic

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coating is absorbed by the uncoated section of the plane sheet; the uncoated section of the plane sheet is provided with a material for absorbing at least a portion of the heat radiated from the catalytic coating or for promoting a recombination reaction of at least one radical; wherein each cross-section of each channel is essentially the same; and wherein the catalyzer is used for an exothermic reaction having a concomitant, homogeneous gas phase reaction (Col. 2, lines 18-24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalla Betta '357. Regarding claims 7-10, Dalla Betta '357 does not disclose expressly the thicknesses of the plane sheet and corrugated sheet. However, it is conventional to fabricate the corrugated sheet having thickness approximately equal or less than the plane sheet and it would have been obvious to do so here to reduce the overall weight of the catalyzer and also reduce manufacturing cost (See USPN 6,436,551). Regarding claims 11-12, it is conventional to provide an uncoated at an inlet and outlet of the catalyzer and it would have been obvious to

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do so here in order to facilitate welding of the inlet and outlet of the plane sheet to the casing or housing of the catalyzer (See USPN 5,366,700) or welding the inlet and/or outlet to the electrical conductors (See USPN 5,441,706).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dalla Betta '357 in view of Dalla Betta et al. (5,518,697). Regarding claims 3 and 6, Dalla Betta '357 fails to disclose the corrugated sheet is uncoated with a catalytic coating. Dalla Betta '697 teaches corrugated sheets (herringbone corrugation pattern) with coated sheet and uncoated sheet. The uncoated sheet dissipates the reaction heat generated from the coated sheet, and thereby control or limit the temperature of the catalyst (Col. 1, lines 40-54 and Col. 2, lines 43-54). Thus, it would have been obvious in view of Dalla Betta '697 to one having ordinary skill in the art to modify the catalyzer of Dalla Betta '357 with corrugated sheet with uncoated catalytic coating as taught by Dalla Betta '697 in order to control the heat generated in the channels and control the temperature of the catalyst.

Allowable Subject Matter

Claims 14-25 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
December 17, 2004

TD


Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700